

8U-69 / product 244N / RN24

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DATA AS OF 2023 (standard replenishment)

8U-69 / product 244N

RN24

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Tactical atomic bomb with a charge developed by NII-1011 (later - VNIIP, now - RFNC-VNIITF, USSR Ministry of Medium Machine Building, Snezhinsk). Chief designers - K.I. Shcholykin, A.D. Zakharchenkov. This is the first Soviet atomic bomb for use on the external suspension of supersonic frontline aviation aircraft. The bomb is designed to destroy fortified areas, command posts, missile positions and other important targets with known coordinates. The bomb and the charge for it were developed in 1957-1961.

Tests of product 244 were conducted in 1960-1961. In the scientific testing unit of the 71st Air Force testing ground (Bagerovo, Crimea), an optimal method for a possible nuclear strike from a fighter-bomber on a ground target was theoretically substantiated. This was a vertical maneuver of the aircraft (pitching at angles of about 45 degrees) with various options for the aircraft to leave after bombing. According to the developers' calculations, the aircraft had the ability, while at a distance of 5-6 km from the target, to carry out a sudden maneuver: 5-6 seconds after entering the pitching position, release an aerial bomb, and then in 9-10 seconds go to a safe distance, avoiding or minimizing the impact of damaging factors of a nuclear explosion on the aircraft. The development of this bombing method using imitation IAB-500 aerial bombs was carried out at the 71st Air Force testing ground (Bagerovo, Crimea) in 1961 under the supervision of the head of the Lipetsk combat training center department I.B. Kacharovskiy. On August 27, 1962, Lieutenant Colonel A.I. Shein, for the first time in world practice, carried out a bombing of a 244N aerial bomb in combat equipment from a Su-7B aircraft using a vertical maneuver (pitching). The test was conducted at the Semipalatinsk test site (see [the chronology of atomic tests](#)).

The 8U-69 bomb / product 244N was accepted into service in 1963 in three modifications (244N-1, 244N-2, 244N-3) with charges of different power.

The development of a more modern version of the RN24 was started at NII-1011 (VNIITF, chief designer - A.D. Zakharchenkov, [source](#)) in 1962. The new bomb was made in the dimensions of the 244N bomb, but with a more powerful charge with slightly larger dimensions (than in the 244N) and with a more compact automatic unit of the munition - with this in mind, the design of the munition was reconfigured. The RN24 bomb was accepted into service in 1971.

Serial production of the 8U-69 bomb / product 244N was started at the end of 1961 at the Instrument-Making Plant in Trekhgorniy. The last two modifications of the bomb (out of a total of five) were also produced by the Penza Instrument-Making Plant (PPZ, Zarechny, now the Start Scientific and Production Center) until the mid-1970s. The first serial special product was released by the Penza Instrument Plant in December 1963 - it was product 244N (not confirmed, [source](#)).

In 1984 the bomb was removed from service.



Atomic bomb "article 244" ([source](#))

The design is an aerial bomb for supersonic carrier aircraft with a pointed nose cone and swept-back stabilizers of the "free feather" type. The IAB-500 atomic bomb simulator bomb was created based on the ballistic body of the 244N bomb. The 244N-T2 transport container was developed for the bomb.

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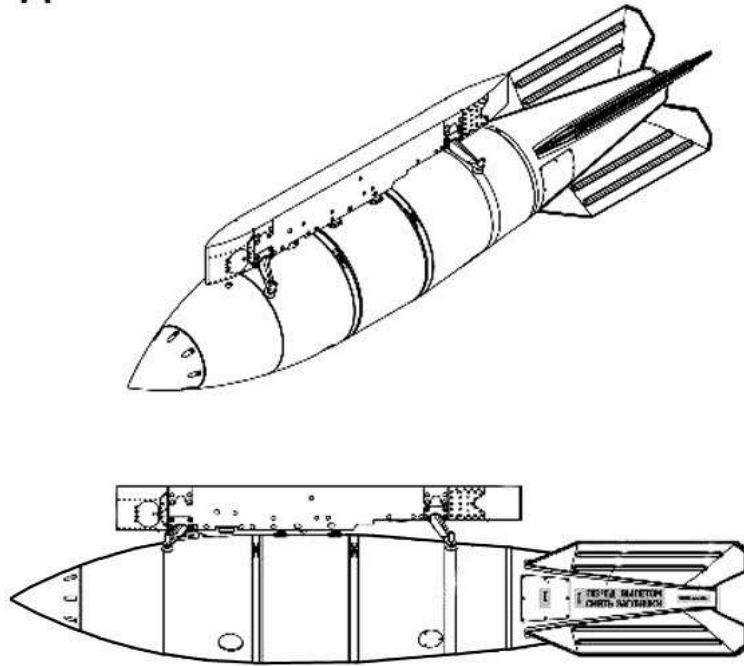
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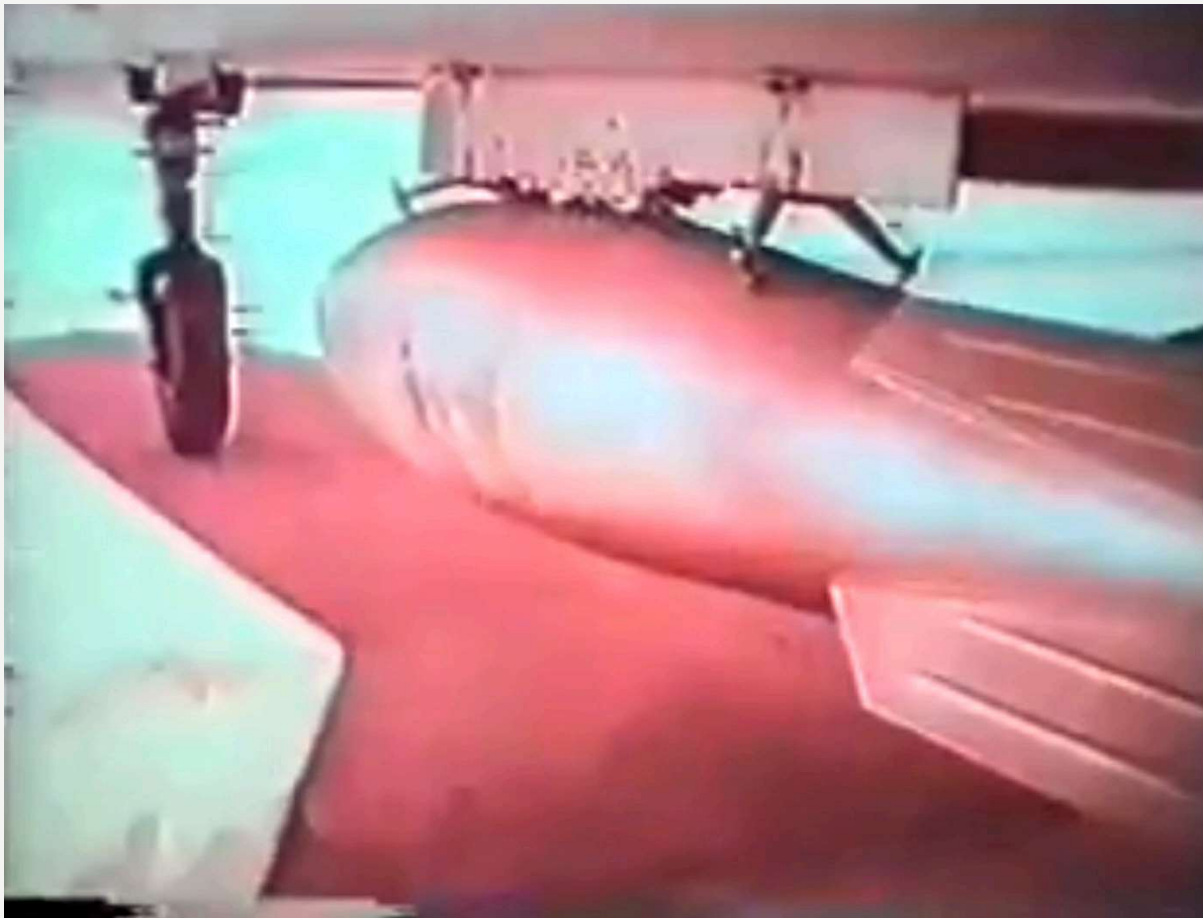
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Изд. 244Н (РН-24) БДЗ-56ФНМ



Schematic drawing of the RN24 bomb with the BDZ-56FNM suspension unit from the assembly model kit ([source](#)).



Product 244N under the Su-7B carrier aircraft. The photo was probably taken on August 27, 1962 at the Semipalatinsk test site (archive film of the USSR Ministry of Defense)

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Bomb "product 244N" / RN24 at the exhibition "70 years of the nuclear industry" in the Manege in Moscow, 2015 (<https://pfc-joker.livejournal.com/>)





Atomic bomb "product 244" ([source](#))



Fragments of the bomb "product 244N" / RN24 at the exhibition "70 years of the nuclear industry" in the Manege in Moscow, 2015 (<https://pfc-joker.livejournal.com/>)



Comparison of the same scale models of the RN24 and IAB-500 aerial bombs (Vasily Dolgosheev, [source](#))

Ammunition automation: the automation system was developed in 1957-1958 by NII-1011, lead designer - K.A.Zhel'tov, general management of the development - V.F.Grechishnikov. The automation ensured adjustment of the delay time setting of the ammunition. The first small-sized bomb "244" used the automation unit YABP BA-5K developed by I.V.Prosvetov ([source](#)).

Performance characteristics of the aerial bomb :

Length - 3365 mm
Diameter - 580 mm
Stabilizer span - 726 mm
Weight - 480 kg

Bombing altitude - 500 - 30000 m
Flight speed - up to 3000 km/h

Warhead : nuclear, developed by NII-1011 (now - RFNC-VNIITF). Bomb versions 244N-1, 244N-2, 244N-3 differed in the power of charges.

Power (options):

- official - 5 kt
- according to the test of 27.08.1962 - 11 kt
- possible options - 3 kt / 5 kt / 10-12 kt / 15 kt / 20 kt (*not confirmed*)

Modifications : a total of 5 modifications of the bomb were produced with different charges and different automation options, there are practically no visual differences.

- **8U69 / product 244N** , variants 244N-1, 244N-2, 244N-3 - the first version of the bomb, serial production since 1961, adoption into service - 1963.

- **RN24** - a more modern version of the bomb, adopted into service in 1971. In the design of the RN24 bomb charge produced by the Instrument-Making Plant (Trekhgorny) until 1970, the AKUS-3 code-blocking safety lock was used for some time, since 1970 - other, more advanced, models of code-blocking devices ([source](#)).

Carriers : the bomb was used from the BDZ-56FN / BDZ-56FNM suspension unit on Su-7B type aircraft ([source](#)) and from the BDZ-66 unit on the MiG-21 and MiG-23/27 ([source](#)).

Su-7B. Modifications of the supersonic MiG-19S (SM-9/9 variant) and MiG-21F (E-6/9) fighters of the Mikoyan Design Bureau were modified to carry the 8U69 bomb. The aircraft were tested, but the Sukhoi Design Bureau Su-7B fighter-bomber became the main carrier of the bomb. In 1962, Su-7B aircraft were involved in real nuclear bomb drops at the Semipalatinsk test site. To use the 8U69 with a single bomb suspended under the fuselage, the aircraft was equipped with a clever PBK-1 device ("device for bombing with a pitch-up"). The electromechanical device made it possible to calculate the bomb release during a pitch-up maneuver for the precise destruction of the target. The release occurred at a speed of 1050 km/h during a maneuver with a sharp climb to 3500-4000 meters at an aircraft angle of 45 degrees to the horizon. When dropped in this manner, the bomb flew along a ballistic trajectory at a distance of 6-8 km, and the aircraft managed to leave the zone of influence of the damaging factors of a nuclear explosion.





Footage of the 244N product being suspended under the Su-7B carrier aircraft. The filming was probably done on August 27, 1962 at the Semipalatinsk test site
(archival film of the USSR Ministry of Defense)

In addition to the Soviet Su-7B, the Polish and Czechoslovak Air Forces were also equipped with devices for using nuclear bombs. The atomic bombs for them were kept in special Soviet storage facilities and could be issued to the allies only in case of war. At the same time, the Czechoslovak and Polish Su-7B pilots were constantly improving their skills in the possible use of nuclear weapons. This is described, for example, in an interesting book by the Czech author Libor Reznyak, *Atomový bombardér Su-7 československého vojenského letectva*, published in 1996. Su-7Bs were supplied to other countries (India, Egypt, North Korea, etc.) in a commercial version without a special suspension unit and without the PBK-1 device ([source](#)).



Practical aerial bomb on the BDZ-56FN suspension unit ([source](#))

MiG-19S (SM-9/9 variant)

MiG-21F (E-6/9)

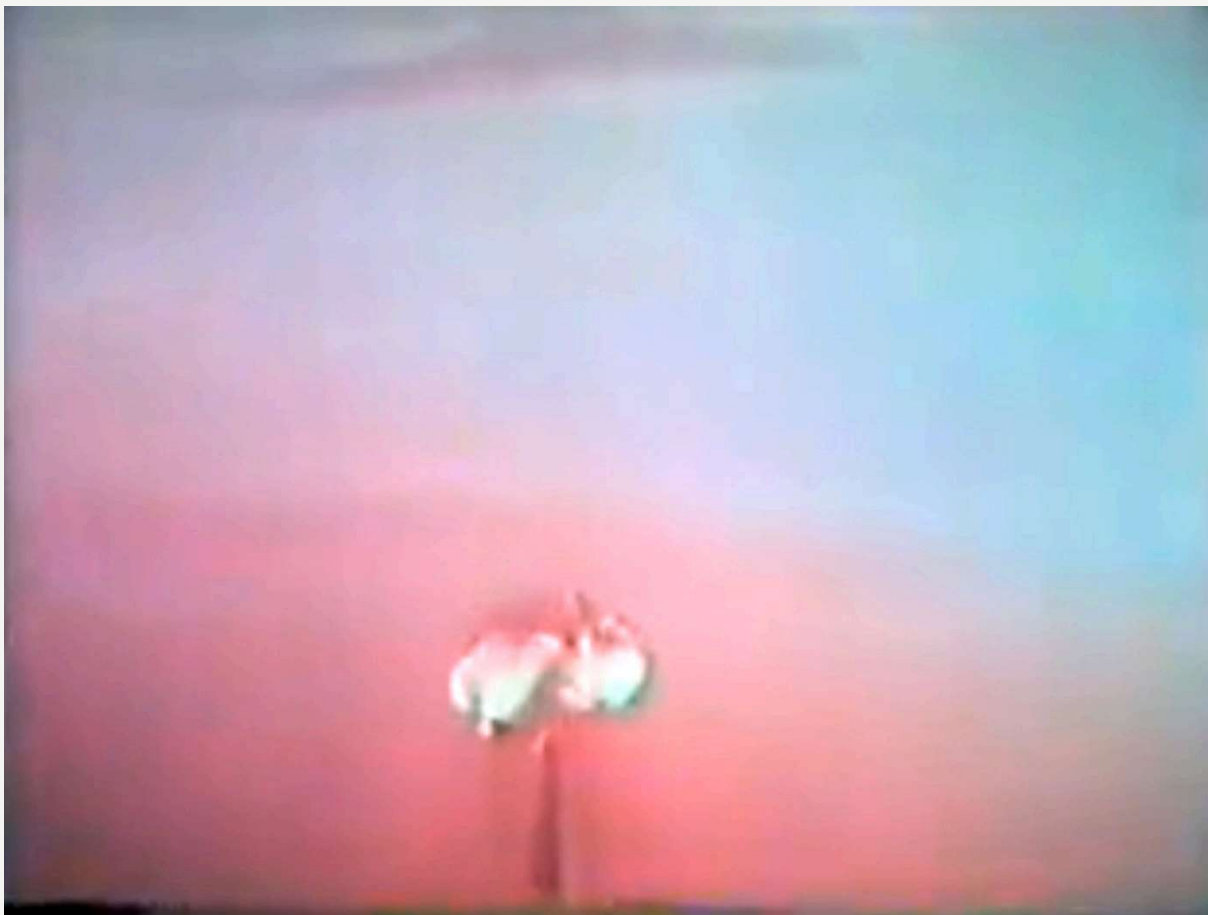
MiG-23 / MiG-27

Su-17

Status : USSR - in service

- 1961 - start of serial production

- 1962 August 27 - test of the Product 244N combat bomb by dropping it from a nose-up position at the Semipalatinsk test site.





Explosion of product 244N, probably on August 27, 1962 at the Semipalatinsk test site (archival film of the USSR Ministry of Defense)

- 1963 - the bomb was accepted into service
- 1971 - the most modern modification of the bomb, RN24, was accepted into service
- 1984 - the bomb was removed from service

Sources :

244N - a non-stop tactical aviation bomb ([source](#))

A Word about Priborostroitelny. Book 2, 1998 ([source](#))

Nuclear aviation bombs ([source](#))

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